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THE GENESEE FARMER.

SATURDAY, APRIL 20, 1839.

DICTIONARY OF TERMS USED IN AGRICULTURE,

AND IN THE SCIENCES MOST INTIMATELY CONNECTED WITH ITS ADVANCEMENT.

[Continued from page 90.]

BLOOD. The circulating fluid of animal bodies, and by means of which the functions of nutrition and life are carried on. Blood is usually divided into arterial blood, which is that given by the lungs to the heart, and by that thrown into the arteries of the system, and the venous blood, which is returned to the lungs through the veins from the surface and extremities. The venous blood is of a dark purple hue when passed into the lungs, and it leaves them of a rich vermillion color. This change is effected by the absorption, while in the lungs, of oxygen, from the atmospheric air with which they are filled in breathing. Messrs. Macaire & Marcet of Geneva, in a series of experiments on the blood, demonstrated that the difference between arterial and venous blood, was as follows:

	Carbon	*Oxygen*	*Nitrogen*	*Hydrogen*
Arterial blood,	50.2	26.3	16.3	6.6
Venous blood,	55.7	21.7	16.2	6.4

Blood is of much use in some of the manufacturing processes, some valuable coloring pigments being derived from it. From the large quantities of albumen it contains, it is the principal ingredient in freeing sugar or molasses from its impurities previous to the conversion into lump or loaf sugar. Blood is found to be one of the most powerful of manures when applied to the ground; and large quantities of it, mixed with other materials, are obtained from the slaughter houses of our principal cities, and appropriated to this purpose. When animals are attacked with fever, one of the surest remedies is bleeding, either local or general, as the cause may demand.

BOG. A swampy piece of ground, usually containing large quantities of vegetable matter, frequently of the nature of a quagmire, and with tufts of coarse grass mingled with aquatic plants spread over its surface, is in Europe, and usually in this country, termed a bog. Such pieces of amphibious soil, are not common in the United States, but in Scotland and Ireland, a very considerable portion of the surface is occupied by such nonproductive lands. Where bogs exist, the only modes of bringing them under culture is by draining, or covering the surface with firm earth, and frequently it is necessary to combine both operations. Draining the land consolidates the surface, and affords opportunity to cut off the bogs or coarse tufts of grass, and introduce more valuable grasses, if not to submit it to the action of the plough. Where the boggy ground is mostly composed of vegetable matter, it is desirable to incorporate the common earths with the surface, thus giving increased powers of production, and greater firmness. Gravel or sand may be carried on when the ground is frozen, if the surface is not hard enough at other times, and by thus uniting draining and the application of earths to impart consistence, such soils, worthless in their natural state, are rendered most valuable and productive.

BONE. The frame work of animals, constituting the osseous structure or skeleton, is called bone, and is composed of several ingredients, the principal one of which is the earth called *phosphate of lime*. This material appears to have been selected for this purpose, as forming much harder compounds with animal membrane than the carbonate, which is used in the composition of shells. The harder and more solid the bone the greater the proportion of the phosphate; thus the bony portions of the ear, are very hard and they consist almost wholly of the phosphate. The long part of the teeth contains considerable carbonate, but the enamel or the cutting parts, which sometimes approaches to the hardness of steel, is nearly pure phosphate. The composition of bone can be determined by fire, or more accurately by the acids; and they are found to consist of phosphate of lime, a small quantity of carbonate of lime, the whole cemented together by a strong elastic animal membrane, to which is added oil, of which the principal depository is the interior of the bone. The use of bone dust, or bones reduced to powder by grinding, has introduced a new era in agriculture in some parts of the world. Crushed bones were first extensively used as a manure in the counties of Lincoln and York about the beginning of the present century; and they are now considered the best and most efficacious application that can be made to the soil. It has been estimated that by extending the growth of the turnep crop to districts where it was not before grown, and thus increasing the means of raising cattle and sheep, and through these indirectly, the culture of wheat and barley, the means of subsistence in England has been increased one fifth. Twelve bushels per acre drilled in, is the usual allowance, but it is sometimes sown broadcast, and the quantity varied from ten to twenty bushels an acre. The experience of farmers who have used this manure, shows that it succeeds best on light dry calcareous loams, or in general on any soils that are dry and do not contain too much alumine. If sown broadcast, the better way is to mix the bone dust with earth and let it slightly ferment before spreading on the land. With turneps, and for these as a manure it is unrivaled, the practice is to drill it in with the seeds. Bones that have undergone fermentation are superior to those that have not undergone this process, and their effect on plants is more rapid. Where land is much impoverished thirty bushels per acre have been used with success. In this country they are well spoken of, and mills for grinding the bones have been erected in various places. It is evident from the chemical composition of the bone (salts of lime and animal matter,) that its action on plants must be energetic, and such is found to be the case. The finer the dust the more rapid its action, while as a matter of course, that which is not so fine, is the most durable in its effects.

BOTS. It is well known that most animals are infested with particular kinds of parasitic vermin that prey upon them, either externally or internally. Thus the ox, horse, sheep, and even man himself in the tropical regions, are attacked by the fly, the species different in the different animals, and the larvæ deposited on the hair, on the mucous membrane of the nose, or in the flesh, lives on the body to which it is attached until it is prepared to undergo its last transformation and become a perfect insect. These flies belong to the genus *Œstrus* of Linn, and the parent of the bot, or the one that attacks horses, is the *Œstrus equi*. The female of this fly is known at once by the extremity of the abdomen being lengthened, and turned under the belly so as to form an ovipositor for placing the eggs on the hair of the horse. As this fly does not bite, it does not occa- that terror to the animal it attacks, as is produced by some of the species of gad fly, and a horse will continue quietly feeding while the œstrus, continually on the wing, is busy depositing the eggs on the hairs. The place selected by the fly is generally on the inside of the knees, or the sides of the horse, always avoiding those parts that the horse is unable to reach with his mouth or tongue. On these points the eggs are rapidly deposited, being fastened to the hair by a glutinous substance. This substance dries, and the egg is firmly attached to the hair, where they remain some four or five days, at which time the larvæ is ready to burst the envelop, and the slight application of warmth and moisture is sufficient to effect this. If at this time the tongue of the horse passes over the hairs to which the larvæ are attached, the operculum or cell is instantly opened, and the worm, small and white, adhering to the tongue, passed with the food into the stomach. This fact of the quickness with which the living worm will be produced when the egg is ripe, may easily be tested by placing somes hair containing eggs or nits in the hand slightly moistened with warm water or spittle, and closing it upon them. They may even sometimes be *hatched* by drawing the moistened hand slowly over the hair of the horse, the worms, lively and vigorous, remaining on the hand when removed. When the bot has descended into the stomach of the horse, it attaches itself to every part of the inner coat, but oftener about the *pylorus* than elsewhere. From this account of its production it is evident the numbers in the stomach may vary from a dozen or twenty to several hundreds. They are usually in clusters, attached to the membrane of the stomach by two hooks or tentaculæ. Some writers have maintained that these hooks are on the tail instead of the head of the animal, and consequently as it is suspended by that extremity, the idea of its penetrating the coat of the stomach and thus causing death is absurd. The researches of Messrs. Youatt & Clark, however, prove that it is by the head the insect is attached, and that they may at times prove fatal, though such instances they conclude are very rare, and that on the whole the bot is rarely productive of injury to the horse. When the bot has attained its growth, it quits its hold, and passing through the intestinal canal falls to the ground, in which it secretes itself and enters the chrysalis state, from which in due time it emerges a perfect insect, and recommences its round of propagation.

BOULDERS. In almost every part of the world masses of rock or stone are found from the weight of many tons down to a few ounces in size, and rounded by attrition, or angular, as when broken from the quarry. Such rocks are frequently many miles from the place of their original formation and deposit, and by fixing their original location, they greatly aid in determining the nature and direction of the causes that in former ages have acted on the face of the earth. In examining the country from Boston to the Mississippi, and tracing the boulders which are scattered over almost the whole of this extensive region to their original deposit, it will be found that they have been in nearly every instance driven from the north in a southern direction. Thus the greywacke boulders found in the valleys of Berkshire, are traced to the west and north of the Hoosic range, over which they have evidently been forced. All are aware that there is no primitive rocks south of the Ontario in the state of New York, yet the whole surface is found sprinkled with boulders, which, from the character of the rocks, must have been derived from the primitive ranges in the St. Lawrence disirict and north of the Ontario. Boulders of gneiss, weighing many tons, are found on the elevated lands of Allegany and other southern counties, which have evidently been transported from the north to their present situation. Perhaps there are few of the rocks of the transition or secondary classes more distinctly marked and more easily known than the red sandstone of the whole southern shore of

Lake Ontario, particularly the strata immediately under the bed of iron ore that reaches from Oneida county into Canada; yet blocks of this very stone may be found in great numbers, on the high lands of the dividing ridge forty miles south of the outcrop of this deposit near the lake, and twelve or fifteen hundred feet higher than the original location. So to the south of the great limestone deposit, boulders of this rock are very numerous. Within five miles, where stones are collected for walls, these boulders are found in some places to constitute one-half or one-third of the stones gathered from the fields. As we recede to the south their number and size become less, and scarcely a trace of them can be found. North of the outcrop of this limestone formation, few or no boulders of this stone are found, even though all the streams flow across it in that direction, thus demonstrating that their removal to the elevated ranges south was effected by force, and that the force exerted was from a northern quarter. Boulders exercise much influence on the agriculture of a country by their size and numbers, and by the material of which they are composed. Thus a country occupied by limestone or gypseous boulders, is more likely to be adapted to the culture of wheat than one in which the granitic form prevailed. So uniform has been the course of the boulders on this continent, the northern part particularly, that the presence of any kind of rock or earth, may be considered proof that the location of the rock, or the strata from which the earths was formed, may be found to the north of its present position.

Remarkable Properties of Water.

It is well worthy of observation, that the most common liquid in nature, besides being better adapted to its numerous uses than any other, from obvious qualities; also, unlike other liquids, possesses other properties which are of the very highest importance in practical operation.

It forms the only exception to the law of expansion by heat. All other substances during the act of cooling after being heated, contract in bulk; but water, after contracting till it cools to 40° Fah. begins to expand, and continues to do so until it is frozen. During its conversion to ice, it expands more than by being heated from the freezing to the boiling point.

In consequence of this expansion before freezing, the surface of rivers and lakes becomes cooled sufficiently for congealation, without reducing the temperature of the water below lower than 40°, and consequently without rendering it more unfavorable to the existence of water animals. For if it did not thus expand, the surface, as it becomes cooler, would increase in specific gravity, and consequently sink to the bottom, until every part was successively brought in contact with the air at the surface, and the whole body of water be cooled down to the freezing point.

If the water, instead of expanding, contracted in freezing, ice would no longer float and be formed at the surface, but would sink; and as it could not be then affected by the warmth of summer, it would remain unthawed; and each successive winter would add to the quantity, until the whole ocean would be filled with ice, first in the frigid zone, and afterwards in the temperate, so far as frost extends. For as liquids do not conduct heat downwards except in a very small degree, there could be but a few feet of water produced by the action of an entire summer's heat upon the ice of winter. The experiment of boiling water for a long time at the surface while ice remains at the bottom proves sufficiently that this would be the case.

The expansion of ice during freezing is also of the highest importance in agriculture. Heavy soils, including a majority of those of our state, become gradually by the action of rains and tillage closely compacted, so that they would in a few years be rendered unfit for culture, were it not for the action of frost, which reaches their minutest particles, and by its expansion during formation, divides and separates them, and renders them loose and friable.

The fact, too, discovered of late years, that ice nearly or entirely obstructs the radiation of heat, is of very high importance, as it consequently protects in a great degree the freezing of lakes and rivers, after they are once coated with it, except so far as it may *conduct* the heat.

As porous substances are much more imperfect conductors of heat than others, the formation of snow by crystallization is a wise provision, protecting as it does the roots of plants and preventing the heat of the earth from passing off from them.

Were it not for *capillary attraction*, which water possesses, it would be no longer retained in the soil after rains, but would immediately pass through them, and the earth become an arid uncultivated surface.

Were it not, also, for the quantity of latent heat required for the liquefaction of ice and snow, as soon as the air became warmer than 32° the snow would instantly melt, and by the sudden production of vast quantities of water, the most destructive inundations would be the consequence.

The conversion of water into steam, and its expansive force applied in the steam engine, are not among its least important properties. J.

PRAIRIE PLOUGHS, &c.

In the first number of the present volume of the Monthly Gen. Farmer, is a description of a prairie plough, invented by Mr. Dutcher of New York; and to show the necessity of such an implement, we gave from the 'Upper Valley of the Wabash,' by Mr. Ellsworth, and from 'Letters of a Traveler,' in the New Yorker, some account of the nature of the obstructions required to be overcome, and the power required for this purpose. Both these writers estimate the force required to break up prairie land equal to from 8 to 10 yoke of cattle, a formidable team truly, and one which if in all cases required, must present a serious obstacle to prairie improvements, and render the invention of a plough that shall dispense with two thirds of this team, a desideratum.

Within a few days we have received a letter from Whitney Smith, Esq., of Wyoming, Illinois, in which he says, "I read your description of the prairie plough with much interest, and have no doubt it would have come into general use on our prairies, but for another and more decided improvement on the same article by an enterprising citizen of an adjoining county. I have not seen his plough, and therefore cannot give you a description of it; but I am credibly informed that he can break two acres in a day with it, with one span of horses only." Should this implement on further trial answer the expectations now formed of it, nothing further in the way of a prairie plough could be desired; and as we have many subscribers in the prairie regions of the broad west, we shall be much obliged to Mr. Smith or any other gentleman of that section who will furnish us with a drawing and description of the new plough, for insertion in the Farmer.

With reference to what Mr. Smith considers the errors of the writers quoted, in regard to the team necessary to break up prairie lands, and the size of the grass roots that constitute the great obstruction, he says, —"I have been a resident of Illinois for three and a half years, and have traveled over a considerable part of the state. I have seen a great deal of prairie broken, and I have never seen more than from two to five yoke of cattle employed to one plough, except when (as Mr. Ellsworth states) young steers are put in the teams for the purpose of breaking more than for the purpose of adding strength. Some of the best breaking I have ever seen performed, was done with only two span of horses. The other error alluded to is the size of the roots. I will admit there are roots on the prairie, as large, and larger than 'a man's finger,' such for instance, as the red root and the rosin weed, both of which are sometimes found as large as a man's arm; but these are rare, and easily taken out. But I have never seen the roots of prairie grass of so large a growth as a man's finger, except in marshes and sloughs, (as wet, miry places are termed in the west) on all tillable lands, I am prepared to say, the grass roots do not exceed in size a medium knitting needle."

We can assure Mr. Smith that every thing relating to western agriculture is interesting to all parts of the country; and he would confer on us and our readers a favor, if he would devote a few hours occasionally to a description of farming in the fertile region in which he resides, including the breaking of the prairie, course of cropping, amount of crops on an average per acre, with such other matters as he may deem worthy of note.

Lenawee County Ag. Society, Michigan.

We are pleased at being able to place on record the formation of an Agricultural Society in this rapidly populating and flourishing part of Michigan; as we are confident that by concentrating the energies of the public spirited farmers and others who have engaged in this association, the best results will ensue. As proof of the fertility and resources of the southern part of that state, we may mention that the White Pigeon section, though only a few years since an entire wilderness, has this year sent more than 100,000 bushels of wheat to market; and there are other parts that have done nearly or quite as well. It is to her fertile soil, to her exportations exceeding her imports, that Michigan must look for relief from her embarrassments, and the sooner that feeling becomes prevalent, not only in that state but in the whole of our country, the better it will be for us. To impress upon all classes the importance of agriculture to the community at large, there is no more effectual mode than the establishment of societies, with annual meetings, fairs, addresses, &c., such as is contemplated by the constitution of the Lenawee County Society. Our limits will not permit us to give the whole of the proceedings, but we cannot consent to omit the following extract from the excellent address of Joseph Gibbons, Esq., which was delivered on the occasion. It is one of the most striking illustrations of the benefit of thorough cultivation and full preparation of the soil, we have lately met with, and we hope such of our readers as are in the habit of planting and sowing a great deal, and gathering but little, will consider whether a concentration of their capital and labor may not be advisable; in other words, whether to cultivate less land and getting greater crops, would not be better than the course now too often pursued. We hope there are many farmers in the vicinity of Adrian that act on the correct principles adopted by the gentleman referred to, as in that case agriculture and the Lenawee Society can scarcely fail of flourishing. But to the address:—

"Out of debt, out of danger," is a very good motto for a farmer, but if he has to go in debt, let it be for *manure*, for that, well applied, will soon pay both principal and interest. We frequently hear it said, "what has been done, may be done;" so thought our worthy and respected fellow citizen, Darius Comstock. He had frequently seen it stated in the Genesee Farmer, (and by the way no farmer should be without that or some other agricultural paper,) that a hundred or more bushels of corn had been raised on an acre of land, and thought if so, it could be done again, and what was the result? I will give you the substance of his own statement to me on the subject, and which I took down at the time that I might make no mistake in relating the facts to others.

His experiment was on two and a half acres of light, sandy land, a clover ley that had been mowed for the two preceding years. On this he spread thirty loads of coarse barn yard manure, to the acre, and turned it under about the middle of the fifth month, (May,) by a furrow from seven to eight inches deep; it was then rolled, harrowed, furrowed and planted in the usual manner, except taking a little more pains than common in having the distances rightly proportioned, and a sufficient quantity of seed put in, so that he might be sure of having three stalks in every hill when he came to dress it. It received no extra attention afterwards, but was once hoed and the cultivator passed through it twice. One portion of the field was planted with the large dent, one with a mixture of red glaze and dent, and one with the

Dutton corn. The dent produced the greatest yield and the Dutton the least. Part of the field produced at the rate of one hundred and thirteen bushels to the acre, (fifty-six pounds to the bushel,) and the whole field a small fraction less than ninety bushels to the acre, of good, sound corn, besides several bushels of poor corn, and this too on what some of you would probaly call about as poor land as we have in the county, and that he himself thinks some of the most unfavorable land he has for producing a great crop; there was too, a green tree standing near the middle of the field which produced an evident diminution in the size of five or six shocks, and the birds took from one hundred to three hundred hills.

From these statements it appears that if he had planted only the dent corn, he would have had more than one hundred bushels to the acre, and he thinks he might have increased the crop one-fourth by different management. The experiment was rendered more striking by his letting ten acres of better land, near by the former, to be tilled on shares. The man to whom he let it, had the privilege of drawing manure from his barn-yard, but I suppose he was like many others, *had to much to do* to find time for that, or else did not think it would *pay the cost*, and what was the consequence? His corn, it is true, was called by many a good crop, but it took nearly eight acres of it to yield as much as was obtained from said two and a half acres, and how many farmers in this county have planted ten acres and not obtained any more, if as much, from the whole. What a comment is this on the propriety of reducing our farms and adopting a better system of cultivation.

IMPROVEMENT OF THE MIND—No. 5.

"*Worth makes the man*," and *worth* belongs to the mind. It is the character of cultivated intellect, and is attached to all that can elevate man to any distinction which is ennobling and permanent. Mind will remain when the changes of earth have passed away. The improvement of it can never be lost, for it becomes a part of the soul itself. It is but the expansion of its very powers and the refinement of its own existence. Consider a young man, coming forward to the responsibilities of life; *how* shall he make a strong and reasonable claim upon the sympathies of his fellowmen and enlist their better feelings in his favor? Will *ignorance* do it? Will the rudeness of uncultivated nature effect it? Will coarseness and perverseness of temper begin to perform the work?—After all the false estimation of artificial objects, homage is every where paid to mind, and benevolence and virtue receive confidence and love. What a motive for cultivation, for the acquisition of true worth. Thus speaks Dr. Good in his Book of Nature:

"Let us begin with the mental faculties themselves. I shall divide them into the three general heads, of powers or faculties of the *understanding;* powers or faculties of *election;* and powers or faculties of creation. To the first belong the principles of perception, thought, reason, judgment, memory, and imagination; to the second, those of choosing and refusing, or of *willing* and *nilling*, to adopt an old and very expressive term, that ought never to have grown obsolete; to the third belong those of hope, fear, grief and joy, love, hatred, anger, and revenge, and whatever else is capable of moving the mind from a state of tranquility and rest."

"Now it is the peculiar feature of physiology, as studied upon the principles of induction, that it has discovered a general adaptation of means to a proposed end; and has hence placed the doctrine of *final causes*—of causes, operating to a final intention—upon a basis too strong to be shaken. What then are the uses or proposed ends of this extensive and complicated machinery of the mind of man? What are the respective parts which its various faculties, in the order in which we have now arranged them, are intended to fulfil, and the means by which they are to operate?

"Their object is three-fold, and in every respect most important, and admirably calculated to prove the wisdom and benevolence of the Almighty architect; they are the grand sources by which man becomes endowed with knowledge, moral freedom, and happiness; and is hence fitted to run the elevated race of a rational and accountable being. From the powers of the understanding he derives the first; from those of volition or election, the second; and from the passions or motive powers, the third; yet never let it be forgoten, that he can to no considerable extent or good purpose, possess either the one or the other, unless the mind, as an individual agent, maintain its self dominion, and exercise a due degree of government over its own forces. This must be obvious to every one, and it is in this harmonious balance, this equable guidance and control, that the perfection of the human character can alone consist and exhibit itself. Unless the faculties of the understanding be called forth, there can be no knowledge; and unless they be properly directed, though there may indeed be knowledge, it will be of a worse nature than utter ignorance; we shall pluck, not of the mixed tree of the knowledge of good and evil, but from the tree of the knowledge of evil alone, without any union or participation of good. In like manner, unless the will and the passions be under an equal degree of guidance, the mind can be neither independent or happy; a mental chaos must usurp the place of order, and the whole be misrule and confusion.

"Now, the grand aim of every living, and especially every intelligent being, is good, pleasure, happiness; for they all, as in the words of the poet, imply the same thing:—

O happiness! our being's end and aim,
Good, pleasure, ease, content, whatever thy name.

But good, pleasure, or happiness, are generic names for a thousand different objects, each of which is pursued as many different ways, not only by different individuals, but sometimes at different periods by the very same person. In all these cases we perceive so many different motives or moving powers.

"In sailing over the sea of life, the passions are the gales that swell the canvass of the mental bark; they obstruct or accelerate its course; and render the voyage favorable or full of danger, in proportion as they blow steadily from a proper point, or are adverse and tempestuous. Like the wind itself, they are an engine of high importance and mighty power. Without them we cannot proceed; but with them we may be shipwrecked and lost. Reined in, therefore, and attempered, they constitute our happiness; but let loose and at random, they distract and ruin us.

"The first instinctive passion discoverable in infant life, is *desire*—a desire of satisfying the new born sensation of hunger; and love, that is, love of the object that gratifies it, follows from the gratification itself; nor can we, through any period of life, love what in our own estimation is undesirable.

"Let us follow up the subsidiary streams into which the passion of love ramifies. On the one hand, we behold the passion of love giving birth to charity, benevolence, philanthropy, mercy, fellow feelings or sympathy generally, friendship and ardor. They form a chaste and happy groupe, are full of social affection, and are hence often called, after the name of the elder sister, the *charities* of life or of the heart.

Mercy, and truth, and hospitable care,
And kind connubial tenderness are there;
And piety, with wishes placed above,
And sweetest sympathy and boundless love.

On the other hand, we behold from the same source a variety of restless and turbulent affections; avarice, or the love of gain; ambition or the love of power; pride and vanity, or the love of splendor, pomp and ostentation; and selfishness, the character of the whole, and which contribute equally perhaps to the unhappiness of those who possess them, and to the world in which they are exercised."

Culture of Indian Corn.

Mr. John Brown, of New Hampshire, says, in the *Farmers' Monthly Visitor*, that when he wants to raise a great crop of corn, or indeed any crop, he considers deep ploughing indispensable. He ploughs in a coat of manure at each ploughing, in order to mix the manure well with the soil, observing at each time of ploughing, to go equally as deep, or deeper, than it had been ploughed before.

"When I calculate on raising a great crop of Indian corn, says Mr. B., I begin to prepare the ground the year before. The first year I draw on fifteen or twenty loads of manure and spread it on sward land, and plough it in, and after a thorough harrowing plant it with potatoes. After the potatoes are dug in the fall, I draw on fifteen or twenty loads of yard manure to the acre, and then plough it. The next spring, after harrowing, I draw on twenty or twenty-five loads of green barn manure to the acre, and a few days before planting, I plough it in. This last coat being left under the furrow, will bring the corn to maturity in the last stage of its growth, while the other coats, being well mixed with the soil, will start the corn with the greatest luxuriance in the first stage of its growth. After the ground is well levelled with the harrow, I then open for planting, the rows three feet apart, and the hills two feet apart, and have four or five kernels put into a hill, but at the first time of hoeing, select three of the most thrifty stalks in each hill to grow, and pull out the rest. When the stalks are four or five inches high, I commence hoeing. The first time, I have it done with the greatest care and neatness. After this I only hoe to keep the weeds down without making any hill. My time of planting is any time from the 20th to the 30th of May. I select my seed when I harvest the corn, and select the best and forwardest ears, and as much as I can from stalks containing two or more, and sometimes five ears."

NATIVE CATTLE.—A writer in the *Yankee Farmer* affirms that we have no need to go abroad for stock for our farms, and that the best of the Short Horns, treated as most of our cattle are, will, in a few generations, become as degenerate as the meanest of our native stock. He says:

"The present goodness of our native stock, considering how it has been uniformly treated from year to year, by the owner, is ample proof of its real goodness. The only thing wanted is constant and proper selection and proper keeping, and our stock would soon be equal to any. As long as our farmers will continue to sell off cows that are worth one hundred dollars and keep those that are hardly worth five, we may never expect to see a fine breed of cattle. The farmers may import what breed they please, and pay as high prices as they please, it will be all the same thing in the end, until they learn to manage better. The rules for selecting for good stock are principally these—deep wide shoulders, wide and deep hips, short and straight back bones, round bodies and well ribbed back, short shin bones, short strong necks, small short heads, small pointed noses. If these rules were observed from generation to generation, by our farmers, the meanest breed of cattle that were ever seen, would soon become first rate. Just so with your hogs and sheep. A very large creature, of any kind, is not so profitable to the farmer, as a good, middling size. The main thing is shape. And no farmer should ever sell, at any price, his best and finest shaped animals, if he intends to keep up a good and profitable kind. A gentleman told me lately that he began farming about twenty years ago. He then took a good deal of pains to find and purchase a superior kind of sheep. He could find none on an average better than his own, which were mean. He adopted the practice of selecting his best lambs every year, for stock. In a few years he had the first rate sheep. The same course will produce the same effects in every kind of animal.

"Instead of paying five hundred dollars for a Durham bull, let any farmer lay out that sum in extra keeping and care of his present stock, and select his best calves every year for stock, at the end of five years he will be better off. I do not deny the notion of purchasing a superior quality of stock, when it can be done, at a fair reasonable price, but only the notion of running into such great extravagance of prices. A little care and patience will serve our farmers a much better purpose, and, in the end, give them full as good and profitable a stock."

Look to your Bees.

If a number of warm days ensue early in the season, and revive bees from their torpidity before there is any opportunity to provide a supply of food, there is great danger of their perishing with hunger; and they must be looked to, to see that they have honey to eat. Bees, after they awake from their torpidity, must eat or die; and as they are out early this spring, it is probable that many swarms will perish ere the owners are aware.—Till there is an opportunity to supply themselves, let honey and water, or molasses and water be mixed together and placed in shallow vessels, either in or near the hives that they may feed. Many bees perish from flying out in the spring in warm sunny days with cold nights, and we have seen the snow banks round hives almost covered with the chilled or frozen insects. In this case, as coming out is no advantage, the remedy is to shut them in.

BERKSHIRE PIGS are getting into as high repute among swine, as the improved short horns have become among neat cattle. We had heard, in several cases, of individual pigs being sold at fifty to eighty dollars. The Franklin Farmer, of the 18th December, informs us of the sale of a pair of Berkshire hogs, at the extravagant price of $500! The purchaser was William P. Curd, Esq., and the seller John R. Bryant, of the Society of Shakers, all of Kentucky.—*Farmers' Monthly Visitor.*

CUTTING RUTA BAGA.—"The only machine necessary for cutting them is the common barn shovel—with it a bushel can be cut in one minute, sufficiently fine for neat stock upon the barn floor, when they can be easily thrown with the shovel into the manger."

COMMUNICATIONS.

Importance of Light to Soils and Vegetation.

It is a remark of Dr. Johnson, that a man can rarely find how little he knows upon any subject of the most ordinary character, until he begins to write upon it; and such has been the progress of human investigation during the last 40 years, that it is a difficult matter for any common man, unless a subscriber to the scientific journals of the day, to keep pace with the progress of the age. Singular as it may appear when we know that agriculture is the great source of subsistence, this art is the only one that is an exception to the observation. We may, however, congratulate mankind with the suggestion that the attention of men of science within the last twelve years, has been more directed to its advancement than it had during many preceding generations, and the present age is now furnishing more contributors to its journals than to any other branch of human industry. This is doubtless a healthy state of public feeling; but we must acknowledge our surprise that none of these writers have examined the operation and usefulness of light upon this favorite pursuit. One cause undoubtedly has been the difficulty of managing such a subtle but pervading substance; and the difficulty itself has arisen in a great degree from the indulgence of an implicit faith in the opinions of Newton and his contemporaries, who after ascertaining that it was a substance, admitted its existence only as an imponderable fluid, that would make no impression on the most delicate balance—that could not be contained in any vessel of their contrivance; nor even exhibited in a state separate from heat, electricity, or magnetism, every effort made to separate them furnishing reason to believe that they were mutually the agents of Omnipotence in the production or creation of each other; and were equally essential to each other's existence.

Indeed I have many times been led to believe, when reading their opinions, that several of what are called simple bodies, silica and lime for instance, notwithstanding their agency in promoting vegetation, are as much the creation of the vegetating process, as the latter is a creation of theirs. Lime is found in the bones and eggs of fowls, and naturalists have thence inferred that fowls must have had access to lime, although kept in a coop during the whole process. Now is it not equally just to conclude that creative Wisdom was using the fowl as the medium of creating the lime; (the same remark applies to the silica which has been found in vegetables that grow on the surface of distilled water,) and reasoning from analogy, when light is produced through the agency of combustion, the natural deduction is, that it existed in the combustible substance or in the oxygen or other supporter of combustion—before combustion took place!—when it is produced by the continued application of heat, until the body to which it is applied becomes luminous, that it is either in the body thus heated or in the caloric!—when it is produced by the percussion of solid bodies, as the striking of flint and steel, that it existed in one or both of the two substances—but suppose all these conclusions are denied, then the inference is unavoidable that the light must be created by the process itself. We know that cause and effect frequently change their relations, and taking it for granted that all substances in the countless changes to which they are subjected, are constantly being created, decomposed and recreated, we have no reason to doubt that light, perhaps the most useful and universal of them all, is subject to the same process. We know that light is hourly extinguished, absorbed, and consumed, and how would it be possible under any different hypothesis to account for its continued existence without any apparent diminution. Vegetable and animal substances frequently become luminous, and light is made visible by their decomposition; mineral substances absorb, transmit, and decompose it; how then can we doubt that it is used and consumed in the composition of the soil, as well as in the growth of vegetables; and how do we know that the largest proportion of light they receive is not drawn from this source as well as their other food. No experiments with which I am acquainted justify an opposite conclusion; because, although many instances can be adduced where plants have had access to the earth without access to the light, and evidently languished for want of the latter, yet none of them show that the earth in which they grew during the same time was supplied with light; the inference therefore is fair that if they could have obtained it by means of the earth, they would have done so. Dr. Priestly's experiments amount in my estimation to almost a demonstration of this doctrine—but we are anticipating him, and will proceed with our own reasonings.

We are all aware that light can be separated into distinct rays, or colors, (and I think I may be justified in calling this process by the irregular chemical term, decomposition,) that when all these rays are collected in a single focus, they combine and constitute what we call a white light; and that when they are all withdrawn or intercepted, the absence of the whole of them constitutes blackness or darkness. Now when vegetation first issues from the earth, we find the stalk or young plant, uniformly blanched or white; if the rays of light were not in the soil, the plant would be black; and whenever it makes its appearance above the surface, and receives from absorption or other cause all the rays of the sunbeam, it ought, from the theory of light, to become perfectly white, instead of assuming the hue of dark green; the inference we should imagine then, was unavoidable, that the plant reflected or repelled some rays, and absorbed only those that combine to clothe it with a verdant hue. It must be thought irrational to suppose the color is received from the root, because the roots and all under the ground are white; is not the argument then irresistible, that the ground must contain a full and perfect combination, or concentration of all the rays. Surely if the leaves absorb such rays as make them green, the roots must absorb something to make them white; and when the stalks begin to assume solidity and its fibres become more tenacious, they both lose their green color which is confined to the leaves, until the expansion of the corolla, at which period every possible color, and every variety of combination of which colors are susceptible, is spread before us. Now where did the corolla obtain these beautiful and splendid combinations, if not from the solar rays? The colors were there before the flower had blown. Not from growing in the light, because nature had provided and perfected them, when enveloped in the calyx; not from the sap elaborated in the leaves and stem, because they furnish the rest of the plant with its verdure; is there then reason to doubt that the soil which gave the plant its original whiteness, furnished the coloring material, and that the latter being changed in its progress toward the corolla, and mingled with the rays and other substances furnished by the atmosphere, finally ended in producing the various colors of the flower. These observations apply to corn growing in the husk, to seeds when enveloped in pulp, to potatoes, carrots, and other vegetables whose colors are furnished under the surface of the earth.

The experiments of Herschel and Leslie demonstrate the existence of caloric, as well as calorific rays in the sunbeam (the great and principal source of light) and at the same time serve to show that these two kinds of rays are never separated but by artificial means; they also show the impractibility of conducting any experiments by which the active agency of light on soils can be ascertained, except in combination of heat. It seems indeed to remain a problem whether light and heat are not the same substance, and many ingenious experiments might be quoted to establish the maxim of Sir Roger De Coverly that much may be said on both sides. Gay Lussac* found that many earthy and mineral substances were decomposed by light without heat, and some by heat without light, but he invariably found that the effect was the same by reversing the process; that the same substance which had been decomposed by light, could easily be decomposed by heat, and that the substances decomposed by caloric, could in like manner be decomposed by light; but many of the most striking experiments were the transmission of light without heat through various transparent mediums, the reflecting and refracting properties of light (by which the power of vision is regulated,) its astonishing velocity, and the existence of very intense heat in the darkest places and the darkest bodies, all tending to show that the two substances have different properties. It may not be foreign to our present purpose to extract from the Philosophical Transactions of 1800, the following table of Dr. Herschel, showing the quantity of both light and caloric, stopped by different materials. There are few circumstances more instructive than the experiments of this great and good man, whose acuteness in penetrating the phenomena of nature shows so clearly the littleness of our own attainments.

COLORLESS SUBSTANCES.		
White flint glass, stops of 100 parts, of heat,	9.	of light, 3.4
Bluish white glass,	25.	8.
Green crown glass,	26.	20.
Talc,	14.	9.
COLORED SUBSTANCES.		
Dark red glass,	66.	99.
Darker do	80.	99.2
Yellow and dark blue (each,)	34.	81.
Orange colored,	61.	78.
Dark green	84.	94.
Indigo,	63.	99.

He also found that the solar spectrum had very different illuminating powers in different parts, and he instituted a series of experiments to exhibit the stoppage of the rays of flame, of live coals, and invisible rays, as he called those from a stove; he found that the solar spectrum contained these invisible rays; they were separated from the visible rays in both instances; he found that the invisible rays had no illuminating power, that the red rays had a little, the purple more, and so on, increasing to the utmost boundary of the violet; but the maximum of heat was found entirely beyond the utmost boundary of the visible rays. Thus, he adds, it appears the solar beam consists of rays that have three distinct effects; one producing light, another heat, and a third producing neither light nor heat, but effecting the greatest chemical changes within the least time. The matter appeared however to be involved in much contradiction;—for instance, flint glass stopped 9 out of 100 direct solar heat, and 3.4 of direct light, but it stopped none of the invisible rays, and only 14 out of 100 of the red rays; thus it is evident the light of the solar spectrum produced heat, or that the calorific part of the colored rays must be different from the invisible calorific rays; the fault (says the modest Herschel) must therefore rest with the philosophers, and we must wait for more particular research.

It must be useless after this exhibit to show the effect of these experiments upon the construction or hothouses, green houses, and other artificial means of forcing vegetation. We have a different object in view; we wish to show the general effect of light as a chemical agent upon mineralogical substances; and that effect consists in disengaging the oxygen by lessening the affinity of the base for it; and also in disengaging the acids by lessening the affinity of the saline base for them. When to these we add that it is essential to the production of hydrogen gas, that the productions of the earth lose their smell, color, taste, combustibility, and fibrous tenacity, when it is absent, we may, perhaps, be enabled to form some faint estimate of its operation upon soils. It is a singular circumstance in these inquiries, that plants, deprived of all their properties, regain them with astonishing celerity by the application of electricity to the soil in which they are growing, thus furnishing evidence of the intimate connexion existing between all these phenomena. We find too that light is attracted and refracted more strongly by combustible than by other bodies, but it is variation in strength* that constitutes the mark of chemical affinity, and therefore the attraction existing between them does not differ from chemical affinity; now if it lessens the affinity of the oxygen for its base, and of the carbonic, sulphuric, acetic, oxalic, and other acids, for their respective bases, all of which form so many constituents of soils; and if the oxides and salts in which the oxygen or acid is

* Chemical Researches, vol. 2, page 186.

* Thomson's Chemistry, 30

held by a weak affinity are thus decomposed by it, its influence, upon these when combined with the electric fluid must be almost boundless, and not only boundless, but wonderfully beneficent, the theories of moisture and meteorology being so intimately associated with these influences. That oxygen is separated from the soil during the day, and hydrogen, azote, and nitrogen, during the night, was long since rendered exceedingly probable by Dr. Priestly,* that a greater or less quantity than is thus separated, would sometimes contribute to the fertility of soils, must be placed beyond a doubt in the minds of those who reflect upon the nature of electricity, oxygen, caloric, autumnal frosts, the effect of moisture and the formation of clouds, but it opens a field for scientific investigation abundantly sufficient to occupy the inventive faculties of man for ages.

[TO BE CONTINUED.]

REMEDY FOR THE HOOF-AIL.

MR. TUCKER—Having noticed considerable in your paper the last year concerning the cure of this dreadful disease, so common among our cattle, I have thought it best to communicate to you what I have tried and believe to be a certain remedy. My cattle in the winter of 1838, quite a number of them, being affected with this disease, I tried for their cure several of the recommendations in your paper, but to no good effect. I finally made an experiment which proved their immediate cure. This was done with salt petre and sulphur; the proportions are one of the former to two of the latter. This must of course be given proportionate to the age and size of the animal. To a common sized cow, I would give 2 oz. of salt petre and 4 oz. of sulphur, but more may be given if necessary. In all cases enough should be given to prove a thorough physic. The best and only effectual way to give this is to pulverize it and make it into balls by mixing with flour and molasses. These may easily be given by placing them on the end of a small stick. The reason of this cure is obvious. The blood of the animal becomes impure, refuses its natural circulation, settles in the limbs, and becomes stagnated. These are well calculated to cleanse and rectify the state of the blood. This should be given in all cases as soon as the first symptoms of the disease appear. It has been recommended by some to make an insertion between the hoofs. This I have tried and believe to be very injurious in any case. The cure I think can only be effected by cleansing the blood. I would recommend bathing them in cold water thirty minutes every day; in this case they should be made thoroughly dry by rubbing them with a coarse cloth or brush. Neat's foot oil might be applied with great advantage in case the hoofs become dry and sunken as they sometimes do. With regard to the cause of this disease, I am yet ignorant, but believe it not to be ergot as some suppose. I have known cattle to have this disease and die which had eaten no other hay than clover; I have likwise known others to eat June-grass, loaded with ergot, and not have the least symptoms of the disease. But be the cause what it may, I believe the above a certain remedy, and think it might, if given frequently, prove a safe-guard against the disease. I had thought to communicate this before, but have deferred that I might have more experience, but I have not been troubled this winter with it among my cattle. Hearing of its return among others, I thought this might be a benefit to them, therefore I communicate it.

Le Loy. D. WARD.

Remedy for Choked Cattle.

MR. TUCKER—We frequently hear of cattle being choked, and through improper management they are many times killed or greatly injured. I would, through the medium of your valuable paper, prescribe to every farmer an instrument for use in such cases, which, from its cheapness and safeness in application, can be possessed and used by any one.

A piece of hard wood is whittled or turned very smooth, 1½ inch in length, 1¼ inch at one end, one-half inch at the other in diameter. A hollow is formed in the larger end in shape something like the hollow at the bottom of a common glass bottle, 1-2 inch in depth, 1 inch width; the out edge of the ball should be rounded off almost to an edge with the outside of the hollow. The shape now would be something like the common long early pear, the hollow however would be larger in the big end of the ball than in the pear. Let a 3-8th inch hole be bored through the centre the longer way, a hickory or elm rod 5 feet long, 1-2 inch diameter, inserted into the smallest end of the ball, and pinned or rivetted in firm to prevent the ball from slipping off. The instrument is now ready for use. If the ox or cow is choked with an apple, potatoe, piece of pumpkin, or what not, you have a convenient, safe and sure remedy at hand. So safe that every one who has a cow ought not to be without it. So easily constructed that any boy that knows how to whittle can make it. Cattle are often materially injured and frequently killed by running down their necks rake tails, hoe handles, whip-stalks and the like, when choked. Their effect and the effect of the instrument I have just described, will easily be conceived—the whip stalk, rake tail, &c. when run down the pipe being so small and round on the end, instead of removing the object intended, slip by and a hole through the pipe is the consequence. Whereas the instrument just described (I have no name for it, please to give it one to suit yourself) being large enough to fill the pipe, and hollowing in the end, the object is brought directly into the centre of it, to slip by is impossible, and the force of the hand at the other end of the stick moves it gradually forward into the stomach. The instrument is then withdrawn and your ox is cured. The ball and rod should be oiled before using. The ox should be put in a stall, or held firmly by the horns and nose, the mouth kept open, and for this purpose a horseman's stirrup will be found very convenient, being placed up edgewise in the mouth; the nose held up so as to form a straight line with the neck, and kept so till the rod is withdrawn; the rod going through the stirrup and down the neck, being cautious that it does not enter the wind pipe. Cattle that are bloated, caused by stoppage at the bottom of the pipe, (this sometimes is the case after eating freely of fresh clover) are relieved by it. And after possessing and using one some 15 or 20 years, and seen hundreds of cattle cured by it, we feel full confidence in recommending its use to others.

S.

THE BLOODY MURRAIN.

MR. TUCKER—Not long since in this vicinity, I saw a case of what was called the bloody murrain, but at the time I did not think it was. The case was of a calf, that one of my neighbors owned. It was taken very suddenly and died of the above disease, which is so fatal among our horned cattle at the present day. This calf ran with three others, and all were fed with the same kind of food, and all received the same attendance through the past winter. About the first of March, the calf was taken, and in about six hours was dead, and was pronounced by all who saw it, to have died with the bloody murrain. We knew no remedy. Very probably there is a sure and perfect remedy for the disease, if rightly applied, and in proper season. Many cattle have died in this vicinity of this fatal malady, within a year past, and very probably if the farmers had known of a remedy they might have saved their cattle. Cattle and sheep are all in good and thriving condition, and have the appearance of doing well through the coming summer.

I think our farmers will in the course of a few years come to the conclusion, that the protection of their cattle and sheep, during our long dreary winters, is the only thing that will make their domestic animals look fine, and in thriving condition when spring arrives. I have heard no complaint this spring about losing cattle, or sheep—all look well. No hoof-ail, or horn ail, existing among them. Never have sheep wintered better in this quarter, than they have the past winter.

South Venice, April 12, 1839. W. S. T.

Cure for Scours in Horses.

MR. TUCKER—If you have not already given to your numerous readers the following recipe for curing horses that are attacked with a dysentery or scours, and you consider it worth a corner in your valuable paper, you are at liberty to do so.

Put into a junk bottle one pint of good gin and one ounce of indigo; shake well together, and turn it down him. I have known it from personal observation to have the desired effect, and complete a cure in a short time.

ABRAHAM H. HALLECK.

To Sugar Makers.

MR. TUCKER—Tell your maple sugar makers that the next time they make sugar, to hang their buckets on the side of the tree instead of placing them on the ground at the root The advantages of hanging the bucket on the tree over the old way are many. If the buckets are set in season they are set on the snow; the trees bored 2½ or 3 feet above the buckets in consequence of inconvenience of boring lower, and spouts 12 or 18 inches in length inserted so as the sap to drop into the bucket below. Objections: the bucket and spouts are so far apart that if any wind blows, the sap, much of it, is driven over the bucket. As the sap runs the snow melts, the bucket is soon undermined and tipped from under the spout or overset, and in either case, a part or the whole of the sap goes to the ground. The buckets are frequently frozen down, and in lifting the bucket to pour out the sap, double the weight, many times, is lifted in snow and ice. As the snow melts away and the ground becomes bare and dry, the bucket being on the surface of the ground, sticks, leaves, and dirt, are usually blowed into them by the wind. If your sheep or hogs break into your sugar bush, they have plenty of work. Hang the bucket on the tree and all this inconvenience and loss are avoided. Do our sugar makers want to know how it is done? I will tell them. The buckets should be made with one ear; two spouts to the tree, one 4 and the other 6 inches in length, the shortest should be made of a white ash sprout, and the longest of sumac or alder, both fitted to an half inch hole, which is bored into the tree 1½ inch deep. Cut a notch in the shorter or ash one 1-2 inch from the out end, on which the bucket hangs, the notch prevents it from slipping off. Try it once and you will never set your buckets on the ground again.

April 1st, 1839. A FRIEND OF IMPROVEMENT.

From the New England Farmer.

Culture of Cabbages.

MR. EDITOR—As it is a pleasure for farmers to communicate their ideas to each other, I think it is a great benefit and even a duty we owe to each other, to gather up all fragments that nothing be lost. I offer you two short articles for publication, if you think them worth notice.

1. *On the Culture of Cabbages.*—About thirty years since the snow fell a considerable depth, early in the season, without much frost in the ground, and continued on the ground until late in spring, and many of the cabbage stumps in my cabbage ground lived through the winter. In April I ploughed the ground, turning in the old stumps. The first of May I began setting out early cabbage plants, and finding many of the old stumps had sprouted, and one of the red kind in particular; the sprouts had the appearance of a plant grown from the seed.

I examined and found the sprout came out of the stump very near to the root, while others farther up the stump were in a situation soon to blossom. I broke off all but the one nearest the root, and cultivated that in the way I did the other plants. In the fall I had a very large and handsome head. I carried it into the cellar, and set it out the next spring with the same success as before, and then continued setting out the same stump with others with it, two years more, from all which I had good heads.

I have set out stumps, occasionally, ever since, and always had good heads; therefore, I recommend it to the public as a good practice for raising cabbages for

* History of Light, page 373, at Seq

early fall use. I find in this method most kinds, except red cabbage, will be too early to keep through the winter.

My method is to cut them off near to the roots, leaving three or four eyes on the stumps, and set them out early in the spring, setting them in the ground slanting, say a slant of forty-five degrees, then cover the end of the stump quite over with loose mould; when the sprouts get to the height of three inches, by pulling open the leaves you may easily ascertain those that will go to seed by the appearance of blossoms. Break off all of this description, leave only one without the appearance of blows and you will be likely to have good cabbages.

I have good red cabbages in my cellar this day raised by the method above described.

GARDINER WATKINS.

Sturbridge, Feb. 12th, 1839.

From the New England Farmer.

Massachusetts Agricultural Society Farm Reports.

No. 1. Levi Goodrich of Pittsfield, Mass., to whom was awarded the premium 125 dollars.

The answers are in reply to the questions proposed in the circular of the Massachusetts Society to the several claimants.

1st. I have 200 acres of land, exclusive of wood land. I have also a farm of pasture land containing 123 acres lying in the town of Dalton about 3 miles from my home farm.

2d. The soil of my farm consists of sand, gravel and loam.

3d. I consider the best method of improving the different soils above mentioned, is to plough and manure with a rotation of crops.

4th. I till about 50 acres of land. I have this year

14	acres	of Rye,
6	"	summer Wheat,
13	"	Oats,
1	"	Rye and Oats,
1 1-2	"	Peas,
3	"	Corn,
8	"	Potatoes,
5	"	Ruta Baga.
51 1-2	acres in all.	

I manure all the land where I have hoed crops at the rate of about 20 loads per acre.

5th. My manure is applied in its long or green state.

6th. I spread and plough in the manure on the land where I plant corn, potatoes and turneps.

7th. My method of cultivating green sward is, to plough in the fall and sow small grain, either rye in the fall, or oats in the spring; the next year manure and plant corn, potatoes or ruta bagas; and the 3d year sow spring grain and stock down to grass.

8th. I mow from 40 or 50 acres of upland, that will average about 2 tons of hay per acre.

9th. Irrigate none.

10th. After my ploughed land is manured I put all the manure I can spare on the low meadows, and think it increases the quantity and improves the quality of the hay.

11th. I mow about 50 acres of meadow that is flowed by the Housatonic river; the quality of the hay is excellent for sheep or cattle, excepting a few loads of coarse hay on some low spots. It produces about 2 tons of hay per acre at the first crop, and a part of it produces a good crop of rowen.

12th. About 20 acres of my meadow was, 7 years ago, a useless swamp, covered with alder and willow bushes, black ash and pine stumps in abundance, the timber had been cut off before I purchased the farm. It was so wet and soft that cattle could not go through it in the summer. I first drained it by ditching; then took all the brush out root and branch, then levelled it with the bog-hoe, and sowed on about 12 quarts of herds-grass and red top seed per acre. The whole expense was about 25 dollars per acre, it is now well worth 100 dollars per acre.

13th. I planted only 3 acres of corn this year; the land was sowed to rye last year, the stubble was ploughed in the fall, coarse straw manure from the sheep-yard spread on in the spring and ploughed in; the land was furrowed 3 feet apart one way for the rows, the other way the rows were planted about 20 inches apart, it was planted the 12th of May, 2 acres of it was the little Canada corn; the produce was 96 baskets per acre, weighing 46 lbs. per basket in the ear. It was perfectly ripe and dry the 20th of August. The other one acre was a large sort of eight and ten rowed corn, which ripened about a fortnight later, but was a much better crop. It produced 152 baskets weighing 46 lbs. per basket in the ear; these baskets will make something more than half a bushel of shelled corn. The produce of this acre will not vary much from 80 bushels.

14th. I planted 8 acres of potatoes this year; a part of the land was green sward ploughed in the spring, spread on manure and harrowed; the potatoes planted were of the variety called Burr potatoes. The produce was about 200 bushels per acre, two acres of oat stubble was ploughed in the fall, 20 loads of manure per acre spread on in the spring and ploughed in, planted the Burr potatoes, the rows 3 feet one way and 20 inches the other, making 47 hills on a rod. The produce was 450 bushels per acre, for which I received of the B. A. Society the first premium for the best 2 acres of potatoes in the county. This season has been unfavorable for potatoes, and the crops in this part of the country are lighter than usual. Last year I had 560 bushels per acre.

15th. I planted 5 acres of ruta baga; they are not yet gathered; I think they will yield about 700 bushels per acre; I feed them to fat cattle, milch cows and sheep.

16th. I sowed 14 acres of winter rye on upland meadow. It was mowed in July, the sward turned over and harrowed. The first week in September I sowed 1½ bushels per acre. It will produce about 16 bushels per acre. I sowed 6 acres of summer wheat; 2 acres of it was on land where I had ruta bagas last year; the land was rich, and the crop, though some injured by the weevil, was good; will produce about 20 bushels per acre; sowed the tea wheat; I sowed 4 acres of wheat on where I had winter rye; the crop was, as I expected, rather light, about 10 bushels per acre. I sowed 1½ bushel per acre; half of the piece was sowed with the tea wheat, and the other half with the old fashioned bearded wheat. The bearded wheat was the stoutest straw and largest kernel, but was more injured by the weevil. There is not much difference in the yield. If the weevil should disappear, as I hope it will, the bearded wheat will be the best kind to cultivate. I prepared all my seed wheat by washing it in brine and rolling it in lime.

17th. I have laid down 10 acres to grass this year, sowed 4 quarts of herds-grass and 4 quarts of clover seed per acre, with spring grain sowed in hay.

18th. For the purpose of making manure, I carry muck and earth into my yards in the fall, and gather all the leaves I can conveniently for litter.

19th. I keep 6 oxen, 8 cows, 12 young cattle, 700 sheep, and 4 horses through the year. I have barns and sheds sufficient to house all my stock. I have cellars under 3 of my barns for the purpose of storing vegetables for feeding stock. The manure is not covered excepting what falls under the sheds.

20th. My cows are of the native, crossed with the Durham breed. The calves that I raise are taken from the cows at 3 days old, and fed with new milk 2 weeks; then with skimmed milk or whey with half a pint of meal stirred into the mess of each calf twice a day until they are 12 weeks old; then they are turned into good pasture where they will do very well until winter; they are then stabled and fed with hay, cut straw and ruta baga grated fine and mixed with the cut hay or straw.

21st. I am not able to tell how much butter and cheese we have made this year. I have kept 8 cows; they are good and in good order, and I think have done well for milk. My family is large, and we use all the milk, butter and cheese we want, and sell some.

22d and 23d. I wintered 5 swine; they are of the Byfield or Moco breed; they are not yet slaughtered. I think they will weigh 400 lbs. per head by the first of December, when they will be 19 months old. My hogs are fed on raw potatoes principally with a little bran mixed with the slop of the house until the first of October, when I commence boiling potatoes and pumpkins, mixing provender made of oats and peas, or oats and rye, with which they are fatted, adding a little dry corn the last four weeks.

24th. I take from my hog-styes about 30 loads of manure in a year. It is made from leaves, straw, potato tops, weeds, and any vegetable substance that comes handy to throw in.

25th. I employ 1 man and a boy in the winter, and 3 men and 2 boys in the summer, besides my own 2 hands which are yet able and willing to labor.

26th. I have about 100 apple trees of the natural fruit; most of them are old and are decaying. In the year 1832 I fenced off two acres of land and prepared it for a fruit yard. I sent to Albany and got a choice selection of fruit trees of various kinds. They lived and appeared very promising until the cold winter of 1834 when they all perished. I think I shall make another trial next spring, and hope for better success.

27th. I have no fruit trees excepting apple trees.

28th. None to be attacked by insects.

29th. I have used no ardent spirits for the last 6 years, and there has been none on my farm, and I hope never will be again. I had some difficulty in getting help in haying and harvesting the first year that I commenced doing without it. I have no trouble about it now, for no man that I hire expects it. I am satisfied from experience that I am better without it, and my hired men are more contented and will do more work, and do it better without the use of ardent spirits, than with it.

Pittsfield. LEVI GOODRICH.

From the New England Farmer.

The agricultural public will feel themselves much indebted for the subjoined communication. The facts to which it refers are astonishing; but nature is full of such wonders. The cause assigned for the curious facts, which are here referred to, we are disposed to regard not only as possible, but highly probable. The effects which are here supposed to follow the toil of these diminutive and humble laborers need not excite any surprise, when we recur for a moment to the immense coral reefs to be found in various parts of the tropical regions and the large island of the Pacific, resting upon these coral formations and the abodes of a large population, the basis or sub-stratum of which islands are the product of the indefatigable labors of the little and humble coral insect. It would seem to be almost a law of divine Providence that the greatest effects should spring from the humblest causes.

We owe an apology to our esteemed correspondent for delaying the publication of this valuable article. He may be assured that though postponed it was not neglected; and that we shall always heartily welcome his communications. H. C.

Providence, Jan. 14, 1839.

MR. COLMAN—I have condensed the following article from a communication upon the formation of vegetable mould, made to the Geological Society of London, by Mr. Darwin, and inserted a paragraph or two of my own. The season will soon recur, when opportunities will be presented to those who delight in observing the curious phenomena of the animated world to refute or confirm the views herein contained.

Mr. Darwin states that his attention was called to the subject of his communication by Mr. Wedgewood of Staffordshire, who showed him several fields, which a few years before, had been covered with lime, and others with burnt marl and cinders. These substances are now *buried several inches beneath the suface*, though the fields have remained undisturbed since they received the top dressings. "Previously to fifteen years since one of the fields was waste land; but at that time it was drained, harrowed, ploughed and well covered with burnt marl and cinders. It has not since been disturbed and now supports a tolerably good pasture. The section here was, turf half an inch thick, mould two inches and a half, a layer one and a half inch thick, composed of fragments of burnt marl, (conspicuous from their bright red color, and some of considerable size, viz: one inch by half broad, and a quarter thick,) of cinders and a few quarts pebbles mingled with earth; lastly, about four and a half inches beneath the surface was the original, black, peaty soil. Thus beneath a layer nearly four inches thick of fine particles of earth, mixed with some vegetable matter, those substances now occurred, which fifteen years before, had been spread on the *surface*. Mr. Darwin states that the appearance in all cases, were as if the fragments had, as the farmers believe, worked themselves down. It does not, however, appear at all possible that either the powdered lime or the fragments of burnt marl and the pebbles could sink through compact earth for some inches beneath the surface and still remain in *a continuous layer*. Nor is it probable that the decay of the grass, although adding to the surface some of the constituent parts of the mould, should separate, in so short a time, the fine from the coarse earth, and accumulate the former on those objects which so lately were strewed on the surface. Mr. D. also remarks, that in fields near towns, which did not appear to have been ploughed, he had often been surprised by finding pieces of pottery and bones some inches below the turf; in a similar manner on the mountains of Chili he had been perplexed by noticing elevated marine shells, covered by earth, in situations where rain could not have washed it on them.

In the spring of 1835, a boggy field was so thickly covered by sand that the surface appeared of a red color; but the sand is now overlaid by three-quarters of an inch of soil. About eighty years ago, a field was manured with marl; and it has since been ploughed, but it is not known at what exact period. An imperfect layer of the marl now exists at the depth, very carefully measured from the surface, of 12 inches in some places, and 14 in others, the difference corresponding to the top and hollows of the ridges or butts. It is certain that the marl was buried before the field was ploughed, because the fragments are not scattered through the soil, *but constitute a layer*, which is horizontal, and therefore not parallel to the undulations of the ploughed surface. No plough, moreover, could reach the marl in its present position, as the furrows in this neighborhood are never more than eight inches in depth. Thus in eighty years, the marl has been covered with a bed of fine earth, averaging 13 inches in thickness.

The explanation of these circumstances, as suggested

by Mr. Wedgewood to the author, although it might at first appear trivial, he did not doubt was the correct one, viz: that the whole is due to the digestive process by which the common earth worm is supported. On carefully examining between the blades of grass in the fields above described, the author found that there was scarcely a space of two inches square without a heap of the cylindrical castings of worms. It is well known that worms swallow earthy matter, and that having separated the serviceable portion, they eject at the mouth of their burrows the remainder in little intestine-shaped heaps.

The worm is unable to swallow coarse particles, and as it would naturally avoid pure lime, the fine earth lying beneath either the cinders and burnt marl, or the powdered lime, would, by a slow process, be removed, and thrown up to the surface. This supposition is not imaginary, for in the field in which cinders had been spread out, only half a year before, Mr. Darwin actually saw the castings of the worms heaped on the smaller fragments. Nor is the agency so trivial as it at first might be thought, the great number of earth worms making up for the insignificant quantity of work which each performs."

Any one may satisfy himself of the immense multitudes of these creatures that are at work in nearly every field, meadow and pasture, by careful observation in the spring.* Not unfrequently in two or three nights, in favorable weather for their operations, a large tract of land will be covered entirely by their ejected matter.—Observing, some years since, the vast number of little earth heaps that had been formed in a single night, and that not a single worm was to be seen in the day time, I provided myself with a lantern on a dark drizzly night, and was surprised to find the whole surface of a large yard litterally covered with them. It was absolutely impossible to cross the yard without crushing thousands of them to death, provided, however, you walked with as little noise as possible, for by stamping the foot, every worm over a considerable area disappeared in an instant.

Thus we perceive what insignificant agents are employed in the economy of nature in effecting important modifications in the condition of nearly the whole superficial covering of the earth. These facts have hitherto been disregarded, and it is not improbable that their value is as yet very imperfectly appreciated. O. M.

More about Hogs.

Any experiments which render the operations of the farmer more certain, or which shall give certain data whereby to calculate the profit or loss of any pursuit in agriculture, are of great value. One trouble in the business of the farm has been, the uncertainty with which the cost and the returns of investments in this occupation has too generally been attended, owing to the remissness of farmers in keeping proper accounts. The keeping of hogs, and the fattening of them, are subjects respecting which much has been said, and much been written, but after all, the exact cost, or an exact account current, has, but in a very few instances, been fairly kept. Arthur Young, many years ago, published some experiments, wherein the expenses were laid down, and the profits also minuted. Mr. Colman also published some experiments a few years ago, which we copied into the Maine Farmer. These were valuable. Until within a few years, it has been generally believed that Indian corn was the only legitimate food for swine, and although they were fed with potatoes and the wash from the kitchen, yet Indian corn, after all, was the only sure substance wherewithal to produce pork.

Now we are willing to acknowledge the great excellence of this article in feeding and fattening hogs, and almost every other animal—man not excepted, but oftentimes the expense of it is so great as to render it very unprofitable as an article for swine diet.

The experiments and researches of Mr. Colman, if we mistake not, established it as a fact that it should not cost more than four shillings (67 cents) per bushel, in order to render it profitable for making pork when round hogs sold at 6¼ cents per pound.

In situations where flour mills abound, the article called pollards, a portion of the ground wheat not fine enough to pack in barrels as flour, is oftentimes used as a food for fattening hogs. According to Young, a Mr. Jebb, a miller of Ireland, instituted some experiments to ascertain its value for this purpose. According to him, a barrel which would weigh 84 lbs. paid in feeding and breeding hogs, 18½ cts. per bushel, weighing 21 lbs. by feeding it out to hogs.

Mr. A. B. Allen, of Buffalo, N. Y., who is doing great good in his experiments in breeding and improving swine, and who has produced some excellent animals by his judicious crosses, informs us that he kept his full grown swine last winter, in the best of order, almost exclusively on raw potatoes, at a cost, including time of attention of only three cents per day per head; and he gives it as his opinion, that had he possessed an apparatus for steaming their food, instead of giving it raw, he would have saved from 25 to 30 per cent. on the above trifling cost. He also remarks, and we think with great propriety—that if this can be done in New-York, Maine, with the best soil and climate in the world for the production of potatoes, can do it with much more advantage.—*Maine Far.*

* An ingenious and observing friend informs me that he has never seen the earth worm in new or uncultivated fields. Is this fact universal?

This fact I believe is not universal. I think I have seen them in new lands; though the places in which they are most commonly to be met with, and in greatest abundance, are places that are surcharged with rotten manure and decayed vegetable matter; and especially, if such places abound in moisture, as in places where soap suds and the wash of the house is thrown. It is their well known habit to come to the top of the ground in the evening after a warm rain; possibly because they can then work to the greatest advantage.

Preparing Seed Wheat.

We have occasionally published articles showing the great importance of preparing seed wheat so as to prevent smut, and we have also published various methods of preparing seed, which have proved an effectual remedy against this injury. We would now urge the importance of properly preparing seed wheat as the cost is trifling, and without this little attention a great loss may be sustained.

A great many methods of preparing seed, in order to prevent smut, have been tried, a good number of which have proved successful. We consider the following a very easy and convenient method; it is practised extensively and with good success, and the preparation is useful to the wheat as it serves as a manure. One great advantage in this mode, is that if prepared, or partially prepared, it may remain some time before sowed, without injury.

Put about half a bushel of wheat into a tub, and add water, then wash it thoroughly, stirring it violently with a rough stick that it may have a good scrubbing. Then turn in water, stir it and turn off the water, repeating this process several times that all the light stuff may be turned off. Wash another lot, and so proceed till it is all washed.

Then add to the wheat strong salt water, no matter if it be as strong as it can be made, allowing the water to rise above the wheat, and stir it well. The oats, if any, and the light grains of wheat, will rise to the top and should be removed. Let the wheat soak a day, two or three days would be better, and if not convenient to sow, let it remain a week or more. Then drain off the water, and add slaked lime till the wheat will separate so that it may be sowed conveniently.

We have known cases of grain remaining a week or two in strong salt water without injury. One case was related to us in which the wheat lay in strong salt water a fortnight, the pickle was then drained off, but the wheat remained wet a week longer; then it was dried and kept till the next year, when it was sown and grew well.

Some cases have been published, in which wheat remained a long time after being limed before it was sown, and it grew well.—*Yankee Far.*

Raise Something.

The substantial comforts of life are drawn from our own soil, and, perhaps, there never was a time when more numerous incentives to its proper culture existed than at present. For the last few years our granaries have been emptied at the return of every harvest. Short supplies, aided somewhat by a monopolizing spirit that is always aroused by a prospect of scarcity, have caused an advance in the price of every article of provisions, which is prejudicial, to a certain extent, to all classes, and particularly oppressive upon those who, either from improvidence or misfortune, are compelled to support their families by their daily toil.

The farmer will be but a temporary gainer by the existence of these high prices, for a necessary consequence to their continuance will be an advance of the price of the labor he hires, or manufactured articles he purchases.

But in addition to all these individual inconveniences, what will be the situation of the country, if we continue content with these short supplies, should a general pestilence sweep over the land in seed time, or in harvest? or, as is now too probable, the nation should be involved in a foreign war?

In most of the old countries of Europe there are national granaries to provide against such calamities; in this we must, at present, depend chiefly upon those of the people to meet such emergencies. Fortunately the farmers in this country are now in a situation that they are not compelled to sell at prices too low to reward them for their toil, and a superabundance will not reduce prices below the intrinsic value of agricultural products when compared with other commodities. But increased attention should be given to agriculture—to the production of the articles of first necessity. The farmer should increase his energies. The high prices his products have for a few years commanded, enable him to employ more labor and make his acres more productive. Mechanics and professional men, if they have the land, or can produce it, should contribute to increase the amount of agricultural productions. The waste spots, too often found about our villages, should be placed under cultivation. A good garden will go much further towards supporting a family than is generally supposed. A small spot of ground well cultivated will produce vegetables enough for a family, and go far towards wintering a cow and a few swine; and, in short, every man who has a just regard for his own independence or the welfare of his country, if his situation permits, should *raise something!—Seneca Falls Memorial.*

Worms in Sheeps' Heads.

Friend Holmes—This is a matter of great importance to farmers, though there is not so much pains taken by most of them about it as there should be. I have tried a number of experiments and one in particular which I feel disposed to communicate for publication in the Farmer, for the benefit of others. It is known that sheep afflicted with this disorder, frequently swell under the throat, but this is generally a symptom in a far advanced stage. I had one last spring that swelled very much, and refused to eat, hung her head down, and was evidently about to cease breathing, unless she could obtain speedy relief; I therefore took a goose quill dipped it in train oil, and put it into each nostril 6 or 8 inches; the mucus began immediately to discharge, and she began to eat, and after repeating it a few times she got entirely well; I tried it upon several others with equal success. One more case however I will mention; at shearing time I discovered one that the glands and roots of the tongue were swelled to the thickness of my hand. I at first thought it was a sore and had matter in it and was about to cut it open, but the thought struck me that it might proceed from worms in the head, I accordingly applied the quill and oil, and to my astonishment in twelve hours there was not the least swelling to be seen. Whether the oil has any effect upon the worms or not I am not able to tell, but I think it does not, but causes the mucus to pass off, for the worms appear to weaken the nausal organ, the head becomes filled up, and that which ought to pass out at the nose, goes into the throat and appears to effect the lungs and unless a remedy is applied there is no alternative but certain death. Paine Wingate.

Hallowell, 3d month, 1839.

P. S. It is with diffidence that I write the above, considering the different opinions that now exist on this subject. If any one has tried any *actual experiment*, (for we want no *guess work*) I should be glad to hear from them through the Maine Farmer. P. W.
—[*Maine Farmer.*

Trees by the Road-side.

We are often asked "shall we set apple trees by the road-side?" We answer yes, if you will set the right kind of trees. The greening apple tree should never be set here. Its limbs run out horizontally, and soon become a nuisance in the highway. The Baldwin and some others have more upright limbs and they should always be preferred for such places.

We have many reasons for wishing to see rows of trees by the road-side. In the first place they are highly ornamental—then they make a pleasant shade for the traveler—they grow twice as fast by a wall near the road-side as in midfield among the grass—they do not shade half so much of your field—they kill all the bushes by the wall-side, and they bear more constantly than in an orchard.

If your road runs nearly east and west, an apple tree planted *close* to the wall on the south side of the road, will not cast half its shadow on to your land—it will not get more than half its nourishment from it. You can well afford, then, to let the public have a portion of its fruit—but if you want it all, why, have late winter fruit and the public will not eat much of it in the autumn. You may secure all that is valuable.

By setting trees thus you have twice as much fruit on half the usual quantity of land. You accommodate the public, and you kill the bushes by the wall-side.

Some people expressed surprise the other evening, at the State house, that the earth under a stone wall should be lighter than that in an open field. They had never heard of it before. But all farmers of observation know the fact. They also know that trees flourish better near a wall. There are various reasons for this. The air and earth are warmer—the earth is richer, for it is never exhausted by producing crops of grain. And where a large wall affords a shelter and a shade it is reasonable to suppose that various salts are here accumulated—for instance salt-petre—which is usually found in sheltered situations.

Another reason why the soil is found richer by the

road-side is to be traced in the clouds of dust that are blown from a traveled road, and are constantly lodging in the adjoining fields.—*Boston Cul.*

Important to Farmers.

The following method of preventing the ravages of the wheat-fly has been laid before the Special Council of Lower Canada, and published by their order. It has been practiced for several years by a farmer of Plantaganet, U. C. with complete success:—

"He pulverized one pound of blue copperas (*vitrol bleu*) and dissolved it in a bucket of water; he put six minots of wheat in a tub and sprinkled it over with a broom, taking care to stir the wheat so that it might be well impregnated with the liquid, which was all absorbed by the wheat, and sowed it the third day after having thus begun to sprinkle it with the above solution, taking particular care to stir it often with a shovel. He sowed his wheat, thus prepared, on the 5th and 6th of May and gathered it in on the 16 and 17th of August. There were oats and mildew (*melle*) among the wheat, which did not spring up. The wheat grew up fine and very clean. Mr. Couillard caused twelve sheaves to be thrashed separately and they produced two minots, though the ground was poor. The neighbors who had not thus prepared their seed suffered much by the fly."

GROWTH OF A DROVE OF PIGS.—Col. Merrit of Jay, informs us that he purchased a drove of pigs or young shoats in Brighton last fall, and drove them *Up East* into Maine. He was four weeks upon the way, s part of the time was stormy and bad traveling.

He kept them upon corn and water, and they gained 1000 lbs. weight. This was probably growth, rather than fat, but at six cents per pound would pay nearly or all the expenses.—*Maine Farmer.*

RAISING CABBAGES FROM CUTTINGS.—A neighbor of ours tells us that he, *accidentally*, raised some fine cabbages from cuttings last year. Some pieces of old *stumps* happened to be buried, in the spring, at the proper depth. They soon sent up shoots (one each), and at an early day, formed excellent heads. There was no tendency to seed, any more than from plants obtained in the usual way.

To try the experiment of getting early cabbages in this way, cut the *stump* into small pieces, with one bud on each, Plant and cultivate them as you would plants from the seed.—*Vermont Chronicle.*

MR. EDITOR—I have kept but *one Cow*, my favorite "old *Grey*." My mother, near four score years old, made from this one Cow, aside from milk and cream for the ordinary use of the family, from April 1 to Jan. 1, 275 lbs. Butter, 250 was sold—also one calf (veal) $4,.70, 1 pig $25,00. One half may safely be passed to the credit of old Grey—making a nett income of $67,20.—Old Grey being the *pet*, has been well fed, well curried, and kept neat and tidy. L. B. PHILBROOK.

Hardwick, March 1839. [*Vermont Chron.*

BARLEY MUSH.—One pound of barley will give the consistence of pudding, to one gallon of water; but it requires to be boiled five hours to bring it to this consistence.—*Cooper.*

Agricultural Warehouse and Seed Store.

79 Barclay-street, New-York.

AT this old established stand, the subscribers take pleasure in announcing to the public, that they have made extensive arrangements to accommodate farmers in all articles connected with husbandry, viz:—Agricultural implements, a full and fresh supply of Field and Garden Seeds, Fruit Trees, Durham Cattle, Chinese and Berkshire pigs, 10,000 Morus multicaulis Mulberry trees; Publications on Rural subjects, &c.

Published here the Rural Library, S. Fleet, editor a few copies of 1st vol. for sale. The object of this work is to constitute a Library at the least possible expense. 2d vol., commencing with Professor Low's Elements of Practical Agriculture, with nearly 250 fine engravigns; subscription $3. Subscriptions received for the Genesee Farmer, Cultivator, &c. &c. J. W. WEAVER & CO.

April 20-wmly 76 Barlay-st, New-York.

Splendid Collection of Fruit Trees.

THE proprietors of the Albany Nursery have just imported, from the celebrated nursery of Rivers, London, FIVE THOUSAND PEACH, PLUM, and CHERRY TREES, of one and two year's growth from the graft, selected varieties of the most choice fruit.—This size of trees has been selected as best adapted for transplanting, not five per cent, having failed of many thousands heretofore imported for our nursery. The fruit will be warranted what it purports to be, and the varieties of choice kinds. At the usual prices.

Also—English and Scotch Elms, European Larch, Scotch firs, (small,) European mountain ash by the hundred, double white and scarlet flowering hawthorns, weeping cypress—Tartarian, Siberian Chinese arbœ vitæ, &c., besides the usual stock of Nursery Plants. Orders transmitted. ap133t J. BUEL & Co.

Morus Multicaulis.

FOR SALE—One thousand five hundred genuine Morus Multicaulis trees, with cuttings on them; they are of thrifty vigorous growth, the wood well ripened. They are choice trees.

Also, 10,000 Morus Multicaulis cuttings for sale, if applied for soon.

Fruit and Ornamental Trees, Shrubs, Green House Plants, &c. for sale as usual. ASA ROWE.

Greece, Monroe Co., March 7th, 1839. m1tw6t

TO FARMERS!!!

THE subscriber having obtained the exclusive right of making, using, and vending Locklin's Patent Cast Iron Plough,—offers them on favorable terms to the farmers of this county. This plough, after having been thoroughly tested, is conceded to be the best plough in use. It turns a clean and handsome furrow, and draws with at least ONE THIRD less power, than any one now in operation. All of which can be substantiated by TRIAL, and by the very best references. Some of which are subjoined.

PUBLIC NOTICE.

Whereas, Nathan Locklin, of the town of Sparta, in the county of Livingston, and state of New York, has made an improved *Cast Iron Plough*, which greatly excels any other Plough before offered to the American public. This plough has been tested by use for two years, by our best Farmers, and on various kinds of land, such as Genesee flats, stubble and straw, clover, wet muck, stoney and oak grub lands; also sward land in all kinds of soil.

It is with confidence, (and this confidence is supported by experience and observation, and the following highly respectable authority,) that he assures the public that there is no plough that can compete with it, for the two following reasons, viz: it will run one-third easier than any other, doing the same work; also, it is stronger, and holds easier, doing the work handsomer, and leaving the land much lighter.

L. A. Ward,	James Abbott,
Samuel P. St John,	Wm. H. Reynale,
W. H. Steele,	Luther Melion,
G. W. Stevens,	Leander B very,
E. L. Arnent,	S. R. T. Wood,
Elijah Wilcox,	Darius Markham,
E. W. Porter,	J. P. Price,
Gideon Osborn,	Wm. Wells,
James D. McCurdy,	Henry Wagoner,
J. H. Consalus,	Othinal Bagler,
Dyer Kingsley,	Henry Kelsey,
Michael Drusbach,	J. T. Beach,
W. S. Fullerton,	Joseph Bowers,
R. W. Fitch,	W. F. Reese,
Jas. Hutchinson, Agent for James Wadsworth,	P. W. Clark,
	Cyrus Jones,
Frederick Marshall,	Eli Bullock,
Egbert Coleman,	N. E. Austin,

Hermitage, May 4th, 1838.

DEAR SIR:—I consider your Locklin Patent Plough a perfect article. It runs deep and light, and makes a fine large furrow. I think it well worthy the attention of all farmers. Yours, Truly,

ANDREW JACKSON.

Mr. Locklin, DEAR SIR.—We hereby certify that we have used the Locklin Patent Plough, for some time and can safely recommend it to the consideration of the Farming Comunity as being the best article of the kind we ever used. It turns a clean handsome furrow, and draws one third easier than any plough within our knowledge.

Judge Rosebrugh,	Groveland.
Ezra Rosebrugh,	Brighton.
Isaac Moore,	do
John Nutt,	Mt. Hope.
John Stanley,	" "
W. H. Scott, Dep. Shff.	Geneseo
Gen. D. McNair,	"
Horace Miller,	Mt. Morris.

The subscriber will furnish the above ploughs at wholesale to country merchants.

OLD IRON wanted in exchange for the above ploughs—also Plough Timber and country produce in general.

Manufactured and for sale at the Rochester Eagle Furnace—also at the Wholesale and Retail Grocery and Provision Store of Langworthy & Lee, 41 Exchange st. A. J. LANGWORTHY.

Corner Mill and Furnace sts.—Near the Genesee Falls.

April 5th, 1839. apr1m

Monroe Horticultural Garden and Nursery,

GREECE, MONROE COUNTY, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with trees and plants in different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer

April 1, 1838. ASA ROWE.

Seed Store Agencies.

GENERAL assortment of Garden, Field and Flower Seeds, put up at the Rochester Seed Store, may be found at the following places; and printed Catalogues can be had on application:

Buffalo..W. & G. Bryant.	Nunda..W. M. Chipman.
Lockport..S. H. Marks & Co.	Canandaigua..B. F. Clark.
Albion..Rathbone & Clark.	Geneva..J. N. Bogert.
Brockport..Geo. Allen,	Waterloo..Abram Deuel.
Batavia..J. V. D. Verplanck.	Auburn..Horace Hills.
Le Roy..Tompkins & Morgan.	Palmyra..Hoyt & May.
Attica..R. & N. Wells.	Newark..E. B. Donne.
Perry. L. B. Parsons & Son.	Syracuse..T. B. Fitch & Co.
Geneseo..J. F. & G. W. Wyman.	Utica..J. E. Warner.
Mt. Morris..R. Sleeper.	Oswego..(will be supplied soon.)

All the ordinary kinds of seeds are put up in small papers as usual and those kinds mostly wanted in larger quantities, are put up in packages by weight. Persons wishing other kinds, or larger quantities, may leave their orders with the agents and the articles will be forwarded.

The character of these seeds is now generally known, and the increased demand for them is their best recommendation. But for the benefit of those agencies that are newly established, I would say, that if these seeds, on fair trial, do not prove superior to those generally hawked through the country, I shall be satisfied that *seven year's experience* has failed to teach me the trade, and will quit the business. M. B. BATEHAM.

Rochester, N. Y., April 1st, 1839.

☞ Subscriptions for this paper will be received by all the above named agents of the Rochester Seed Store.

To Farmers.

PRODUCE STORE.—The subscriber has removed his Store from the corner of Exchange and Buffalo sts., to No. 33 Exchange st., near the Canal. Where he will pay cash and the highest prices for Timothy and Flax Seeds, Corn, Oats, White Beans, Pork, Butter Lard, Hams, &c.

Just received, a superior quality of Large, Medium, and Small Clover Seed, and a quantity of clean Timothy Seed

Farmers are respectfully invited to give him a call before purchasing or disposing of the above articles elsewhere

SIMEON P. ALCOTT,

Rochester, April 4th, 1839. [6t] Agent.

Improved China and Berkshire Pigs.

THE subscriber keeps constantly on hand and for sale the above very superior hogs. They are the very choicest kinds of England and America, and are universally preferred by all who pay the least attention to the improvement of their stock.

The Berkshires are large, easily weighing 400 to 600 lbs., according to keep, at 18 months old, and grown hogs of this breed have been sold the past year in Kentucky from $200 up to $500 per pair. The China are a smaller race and much finer in their points than the Berkshire, and weigh at 18 months 300 to 400 lbs. They are celebrated for the delicacy of their meat, easiness to keep, and aptitude to fatten, and for producing a more rapid improvement in crossing with the common hog than any other breed known.

If called upon, the subscriber will give the most satisfactory reference of the perfect purity in blood of the above animals, and the superiority and care of his breeding, and residing as he does at the great shipping port of the lakes, Western gentlemen, in addressing their orders to him, will make a considerable saving in the charges of feed and transportation.

Prices of Berkshire pigs per pair, 6 to 8 weeks old, caged and shipped,.....$20 00

China do.,.....15 00

When taken at the farm without box, $2 per pair less will be charged. Crosses of the above with each other called the Tuscarora, and in England the Tonkay breed, at 15 to 20 dollars per pair.

Pigs will not be considered as engaged unless the amount of them is remitted at the time of ordering, or reference given. *Address, post paid,* A. B. ALLEN.

Buffalo, March, 1839.—mar 9-m3t w9t

New Arrangements.

THE subscriber would respectfully inform the public, that he has taken the entire management of the Rochester Seed Stoe. Having had seven years' experience in the business in this place, he flatters himself that his knowledge of the wants of the community, and his facilities for supplying those wants, will enable him to give the fullest satisfaction, and secure for the establishment a continuance of that public confidence and liberal patronage which it has hitherto received.

He has now on hand a very large assortment of English and American Garden, Field and Flower Seeds, of the best kinds and latest growth, and several tons weight additional will be received direct from England on the opening of navigation.

The regular agents for the establishment will be supplied immediately.

Catalogues may be had gratis on application.

Rochester, March 1st, 1839. M. B. BATEHAM.

WM. PRINCE & SONS will make sales of trees and cuttings of the genuine Chinese Morus multicaulis, Morus Expansa, Alpine, Broussa, Canton, and other varieties, deliverable to the purchaser at such period in the spring as is convenient to them, and will enter into contracts accordingly. Prices and terms for the trees and cuttings will be forwarded to all who may apply for them by mail, as well as prices of Silk Worm Eggs, Mulberry seed, &c. The Multicaulis Trees are remarkably vigorous, and as we first imported the genuine tree, purchasers are sure of obtaining the true kind. It is from this cause and from the great attention paid by them, that the trees they have sold have given universal satisfaction.

N. B. Fruit and Ornamadtal Trees, Plants and Seeds, can be supplied to any extent, and all articles will be packed so as to support any voyage and be forwagded in the most careful manner.

Flushing, near New York, Feb. 12, 1839. feb 23-10t

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public tha he has for sale at his Nursery in Rochester, Monroe county state of New York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting which he will sell on the most reasonable terms.

April 15, 1838. SAMUEL MOULSON.

N. B. Cash will be paid for a few thousand two years old APPLE TREES.

For Sale.

A SMALL FARM, finely situated, and of uncommon productiveness, near a large village on the Erie Canal, and admirably adapted to the dairy business and marketing. For further particulars, and terms, inquire at this office. Dec. 29—tf

Morus Multicaulis.

A FINE lot for sale; also, a few English Hawthorn of large size, a very desirable lot, by S. MOULSON,

February 27. Front street.